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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,530	07/11/2005	Hubert Baumgart	PAT-00344	4046

77224 7590 06/23/2009

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EXAMINER	
FRANK, NOAH S	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
06/23/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Nienhaus et al. (WO 02//31071 using US 6,903,145 as the English translation) in view of Ohrbom et al. (EP 0 915 113), as applied to claims 1 and 19 as set forth in the previous office action, and further in view of Blum et al. (WO 02/02704 using US 6,803,393 as the English translation).

Considering Claims 29: The previous office action has set forth the rejection of claims 1 and 19, the claims upon which claim 29 is dependent. The added limitations do not affect the rejection, as they are drawn to properties of the system, and while the Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s), the reference(s) teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. the claimed change in gloss, cross-cut index and blister index would implicitly be achieved by a composite with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure.

Allowable Subject Matter

Claim 10 is allowed.

Neinhaus does not teach the isocyanate-reactive component comprising allophanate groups. Additionally, the skilled artisan would not have found it obvious to incorporate allophanate groups into a component that is preferably a hydroxyl containing (meth)acrylate.

Response to Arguments

Applicant's arguments filed 5/26/09 have been fully considered but they are not persuasive.

In response to applicant's arguments that there is a lack of motivation to combine Ohrbom with Nienhaus because environmental etch resistance and rheology control are inherent in Nienhaus without modification, Ohrbom specifically teaches that his cure system provides rheology control and etch resistance in systems curing also through crosslinking of hydroxyl groups with polyisocyanate crosslinkers (¶0001 of Ohrbom). While Nienhaus may contain carbamate linkages due to the reaction of the hydroxyl groups and isocyanate groups, these will not be present in the initial reaction mixture, but after the composition is already cured. Ohrbom teaches using compounds already containing carbamate groups in the reaction mixture to cure at the same time as the hydroxyl and isocyanate functionality, leading to rheology control and etch resistance. As for an expectation of success, the skilled artisan understands that etch resistance

and rheology control are relative measurements, and something that already has a high degree of either is capable of increasing that property. This understanding, along with Ohrbom's teachings, gives a reasonable expectation of success to incorporate carbamate functional compounds into the invention of Nienhaus.

In response to applicant's arguments that rheology control is not an issue with Nienhaus, Ohrbom teaches that good rheology control is due to the relatively fast reaction of the melamine with carbamate under the curing conditions (¶0009 of Ohrbom). While the curing conditions may be a lower temperature in Nienhaus due to his lack of blocked polyisocyanates, the rheology control will still be present due to the reaction of the melamine with carbamate. Again, the fact that rheology control is not a problem does not mean that it cannot be improved via the teachings of Ohrbom.

In response to applicant's arguments that Nienhaus does not suggest the desirability of using amino resins in combination with the coating constituents taught, Nienhaus teaches them as an optional component. This teaching, along with Ohrbohm's teaching of carbamate and melamine cross-linking, would lead the skilled artisan to pick this additional crosslinker when combining both references.

In response to applicant's arguments that the references are not analogous because Ohrbohm is a 1K system whereas Neinhaus is a 2K system, the method of cure of both a 1K and 2K polyurethane system is identical, the only difference is that the polyisocyanate is stored in a blocked form (1K) or in a separate container (2K).

In response to applicant's arguments that Blum does not teach the claimed concentration of element C, the examiner intended to imply that Blum teaches a general

range of crosslinkers, which when applied to Nienhaus in view of Ohrbohm, would be understood as both isocyanate and aminoplast crosslinkers.

In response to applicant's arguments that there is no rationale for combining Nienhaus and Blum the rationale comes from the fact that they are similar compositions, yet Nienhaus is silent on specific ranges of the components. The skilled artisan would be motivated to look towards a similar composition in determining the preferred ranges for such a system.

In response to applicant's arguments that Blum does not teach element D, it is understood that element D corresponds roughly with A1 of Blum.

In response to applicant's arguments regarding the phrase, "Nienhaus et al. teaches the basic claimed composition as set forth above", this was not intedned to mean Nienhaus alone, but the rejection of Nienhaus in view of Ohrbom as set forth above.

In response to applicant's arguments titled "Response to Arguments", Ohrbohm teaches a system that cures via an OH/NCO reaction, Ohrbom specifically states that the composition cures via crosslinking of hydroxyl groups (OH) with polyioscyanate crosslinkers (NCO) (¶0001).

In response to applicant's allegations of hindsight reasoning, there are no incompatibilities present between two systems that both cure via the polyurethane reaction, regardless of the fact that one is held in a blocked form.

In response to applicant's arguments that blocked and unblocked polyisocanates do not undergo the same mechanism when reacting with hydroxyl groups, while direct

nucleophilic attack is possible, this is the same mechanism by which unblocked isocyanates react with hydroxyl groups. Furthermore, applicant has admitted that the blocked isocyanate may deblock to regenerate free isocyanate (p24 of arguments filed 5/26/09).

Any other arguments from the section titled, "Response to Arguments" have been sufficiently responded to above.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOAH FRANK whose telephone number is (571)270-3667. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Mark Eashoo/ NF
Supervisory Patent Examiner, Art Unit 1796 6-10-09